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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/742,661      | 12/21/2000  | Vincent M. Addressi  |                     | 7521             |

7590

07/07/2005

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EXAMINER

NEURAUTER, GEORGE C

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/742,661

Applicant(s)

ADESSI, VINCENT M.

Examiner

George C. Neurauter, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/21/00
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

Claims 1-15 are currently presented and have been examined.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3, 6-12, and 14-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 is rejected under 35 USC 101 because claim 1 recites a data structure which is not embodied in computer readable media. Therefore, the "dynamic connection structure means" is descriptive material *per se* and is nonstatutory since the data structure cannot cause function change within a computer and the claim does not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. See *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 and MPEP 2106, section IV, and subsection (B) (1) (b).

Claims 2 and 3 are rejected under 35 USC 101 because claims 2 and 3 recite computer programs claimed as computer listings *per se*, meaning they are not "physical things". Therefore, the

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"binary tree algorithm means" and "ordered binary tree algorithm means" are descriptive material *per se* and are nonstatutory since they are not computer components nor statutory processes, as they are not "acts" being performed. The claims do not define any structural and functional interrelationships between the computer program and other claimed aspects of the invention which permit the computer program's functionality to be realized. See MPEP 2106, section IV, subsection (B)(1)(b).

Claims 6-12 and 14-15 are rejected under 35 USC 101 because a process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459. The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The claimed invention does not produce a concrete and tangible result since the claimed invention, given its broadest reasonable interpretation as required by MPEP 2111, is an abstract idea that can be accomplished by manual means. The Examiner's interpretation of each claim is shown below.

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Claim 6 is interpreted wherein "adding a node to an ordered binary tree using a binary tree addition algorithm, where the node added corresponds to a client which requires addition to the dynamic connection structure" is interpreted wherein the ordered binary tree or "dynamic connection structure" is written by hand on a piece of paper by a person and the person adds a name of a person that needs to communicate with other people contained within the ordered binary tree to the ordered binary tree by mentally performing a binary tree addition algorithm, "establishing a client's appropriate network connections based on the corresponding node's position in the ordered binary tree" is interpreted wherein the person who created the ordered binary tree on the piece of paper looks at the paper to determine what other person's names are connected with the person based on their position in the ordered binary tree, writing down the people's names and locations on another piece of paper and giving the paper to the person, and "removing a node from an ordered binary tree using a binary tree removal algorithm, where the node removed corresponds to a client which requires removal from the dynamic connection structure" is interpreted wherein the person, using an ordered binary tree or "dynamic connection structure" which is written down on a piece of paper, removes a name of a person that no longer needs to communicate with anyone

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contained within the ordered binary tree from the ordered binary tree by erasing the name by mentally performing a binary tree addition algorithm.

Claims 7 and 8 are interpreted wherein "the positioning of a client's corresponding node in said binary tree is determined by one or more characteristics of said client" including "said client's network connection speed" is interpreted wherein a person's speed in which their ability to go to a location where another person is used to determine where their position is within the binary tree.

Claim 9 is interpreted wherein "the type of binary tree addition algorithm used is an incomplete binary heap addition algorithm and the type of binary tree removal algorithm used is an incomplete binary heap removal algorithm" is interpreted wherein the person who writes or erases a person's name from the written binary tree is able to perform the incomplete binary heap addition and removal algorithms mentally.

Claims 10 and 11 are interpreted wherein "the positioning of nodes in the tree is ordered by one or more characteristics of said nodes' corresponding clients" including "the relative network connection speed of said nodes' corresponding clients" is interpreted wherein a person whose name is written down as a node within the binary tree and their ability to go to a

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location where another person at a certain speed is used to determine where their position is within the binary tree.

Claim 12 is interpreted wherein the "sending the clients information which includes new connection information" is accomplished by giving a person a piece of paper that shows another person's current location and "modifying said client's active connections in a manner determined by said information" is accomplished by writing down the other person's name and location next to the first person's name in order to correlate the two people together.

Claim 14 is interpreted wherein the "a client or server sends the client new connection information, which includes information referencing clients with which connections are required" is accomplished by a person receiving a piece of paper from another person which contains a third person's name and location who has information that the first person needs to know, "said client which receives said information completes transmission over connection that are required to closed, than closes said connections" is interpreted as once the person receives the information they need, they stop communicating with that person, and "said client establishes connections with clients, as specified in said new connection information" is interpreted as a person going to the location to talk to the

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person written on the piece of paper and establishing communication with the person.

Claim 15 is interpreted wherein "a client or server sends the client new connection information, which includes information referencing clients with which connections are required, and also includes new connection information for any of said clients" is interpreted as a person giving another person a piece of paper that contains the name of a third person's name and location which has information that the first person needs to know and the names and location of the person who gave the first person the piece of paper, "said client which receives said information completes transmissions over connections that are required to be closed, and closes said connections" is interpreted as once the first person receives the information they need, they stop communicating with the person, "said client establishes connections with clients, as specified in said new connection information" is interpreted as a person going to the location to talk to the person written on the piece of paper and establishing communication with the person, "said client sends new connection information to any of said clients which require new connection information" is interpreted as once the first person learns of the needed information, the first person copies the name and location of

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the third person on another piece of paper and gives the piece of paper to the person who also needs the information from the third person.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 4 is rejected under 35 USC 112, first paragraph because the claim is considered to be of undue breadth due to a recitation of a single means that covers every conceivable means for achieving the stated purpose. See MPEP 2164.08(a) and *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the

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invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6 633 544 to Rexford et al.

Regarding claim 1, Rexford discloses a dynamic connection structure means for transmitting packets between clients on a network (Figure 6; column 10, lines 45-63).

Regarding claim 2, Rexford discloses a binary tree algorithm means (Figure 8; column 12, line 19-column 13, line 56) for determining client connections in a dynamic connection structure (Figure 6; column 10, lines 45-63). (column 12, line 19-column 13, line 56, specifically column 12, lines 19-33)

Regarding claim 3, Rexford discloses an ordered binary tree algorithm means (Figure 8; column 12, line 19-column 13, line 56) for determining client connections in a dynamic connection structure (Figure 6; column 10, lines 45-63), wherein the positioning in the binary tree of nodes, which correspond to clients in said dynamic connection structure, is ordered by one or more characteristics of said clients. (column 12, line 19-column 13, line 56, specifically column 12, lines 19-33)

Regarding claim 4, Rexford discloses a means of transmitting messages between clients in a dynamic connection

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structure, or between clients in said connection structure and external servers, or between external clients and external servers in a way which facilitates both the repetitive transmission of packets between clients in said dynamic connection structure and the repetitive reorganization of said dynamic connection structure. (Figure 6; column 10, lines 45-63; column 12, line 34-column 13, line 5)

Regarding claim 5, Rexford discloses a method of transferring a file between clients over a network comprising the steps of:

creating of a dynamic connection structure of clients; dividing the file into packets; transferring each of the packets sequentially across open network connections contained in the dynamic connection structure. (Figure 6; column 8; lines 15-39; column 10, lines 45-63; column 12, line 34-column 13, line 5, specifically column 12, lines 34-36)

Regarding claim 13, Rexford discloses a method of repeatedly transmitting data packets between clients in a dynamic connection structure and repeatedly reorganizing said dynamic connection structure comprising the following order-independent steps:

a client ("node") contacts a server ("node") to request addition to the dynamic connection structure; a server transmits

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information including new connection information to a client; a client transmits information including new connection information to a client; a client transmits information including new connection information to a server; a client in said dynamic connection structure transmits one or more data packets to another client in said dynamic connection structure; a client in said dynamic connection structure transmits information to a server regarding a client which requires removal from said dynamic connection structure. (column 3, lines 7-26; column 10, lines 45-63)

1. Claims 6-12 and 14-15 are rejected under 35 U.S.C. 102(a) as being anticipated by a mental process augmented by pencil and paper markings. See *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969).

Claim 6 is interpreted wherein "adding a node to an ordered binary tree using a binary tree addition algorithm, where the node added corresponds to a client which requires addition to the dynamic connection structure" is interpreted wherein the ordered binary tree or "dynamic connection structure" is written by hand on a piece of paper by a person and the person adds a name of a person that needs to communicate with other people contained within the ordered binary tree to the ordered binary tree by mentally performing a binary tree addition algorithm,

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"establishing a client's appropriate network connections based on the corresponding node's position in the ordered binary tree" is interpreted wherein the person who created the ordered binary tree on the piece of paper looks at the paper to determine what other person's names are connected with the person based on their position in the ordered binary tree, writing down the people's names and locations on another piece of paper and giving the paper to the person, and "removing a node from an ordered binary tree using a binary tree removal algorithm, where the node removed corresponds to a client which requires removal from the dynamic connection structure" is interpreted wherein the person, using an ordered binary tree or "dynamic connection structure" which is written down on a piece of paper, removes a name of a person that no longer needs to communicate with anyone contained within the ordered binary tree from the ordered binary tree by erasing the name by mentally performing a binary tree addition algorithm.

Claims 7 and 8 are interpreted wherein "the positioning of a client's corresponding node in said binary tree is determined by one or more characteristics of said client" including "said client's network connection speed" is interpreted wherein a person's speed in which their ability to go to a location where

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another person is used to determine where their position is within the binary tree.

Claim 9 is interpreted wherein "the type of binary tree addition algorithm used is an incomplete binary heap addition algorithm and the type of binary tree removal algorithm used is an incomplete binary heap removal algorithm" is interpreted wherein the person who writes or erases a person's name from the written binary tree is able to perform the incomplete binary heap addition and removal algorithms mentally.

Claims 10 and 11 are interpreted wherein "the positioning of nodes in the tree is ordered by one or more characteristics of said nodes' corresponding clients" including "the relative network connection speed of said nodes' corresponding clients" is interpreted wherein a person whose name is written down as a node within the binary tree and their ability to go to a location where another person at a certain speed is used to determine where their position is within the binary tree.

Claim 12 is interpreted wherein the "sending the clients information which includes new connection information" is accomplished by giving a person a piece of paper that shows another person's current location and "modifying said client's active connections in a manner determined by said information" is accomplished by writing down the other person's name and

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location next to the first person's name in order to correlate the two people together.

Claim 14 is interpreted wherein the "a client or server sends the client new connection information, which includes information referencing clients with which connections are required" is accomplished by a person receiving a piece of paper from another person which contains a third person's name and location who has information that the first person needs to know, "said client which receives said information completes transmission over connection that are required to closed, than closes said connections" is interpreted as once the person receives the information they need, they stop communicating with that person, and "said client establishes connections with clients, as specified in said new connection information" is interpreted as a person going to the location to talk to the person written on the piece of paper and establishing communication with the person.

Claim 15 is interpreted wherein "a client or server sends the client new connection information, which includes information referencing clients with which connections are required, and also includes new connection information for any of said clients" is interpreted as a person giving another person a piece of paper that contains the name of a third

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person's name and location which has information that the first person needs to know and the names and location of the person who gave the first person the piece of paper, "said client which receives said information completes transmissions over connections that are required to be closed, and closes said connections" is interpreted as once the first person receives the information they need, they stop communicating with the person, "said client establishes connections with clients, as specified in said new connection information" is interpreted as a person going to the location to talk to the person written on the piece of paper and establishing communication with the person, "said client sends new connection information to any of said clients which require new connection information" is interpreted as once the first person learns of the needed information, the first person copies the name and location of the third person on another piece of paper and gives the piece of paper to the person who also needs the information from the third person.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 3 388 381 to Prywes et al;

US Patent 5 163 042 to Ochiai;

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US Patent 5 485 455 to Dobbins et al;

US Patent 5 491 694 to Oliver et al;

US Patent 5 521 910 to Matthews;

US Patent 5 790 546 to Dobbins et al;

US Patent 5 915 255 to Schartz et al;

US Patent 6 336 147 to Brownell et al;

US Patent 6 411 957 to Dijkstra.

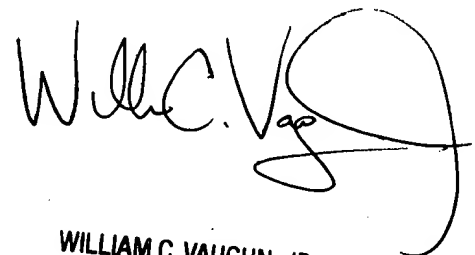
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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gcn

A handwritten signature in black ink, appearing to read "W.C. Vaughn, Jr.", with a large, stylized flourish at the end.

WILLIAM C. VAUGHN, JR.  
PRIMARY EXAMINER